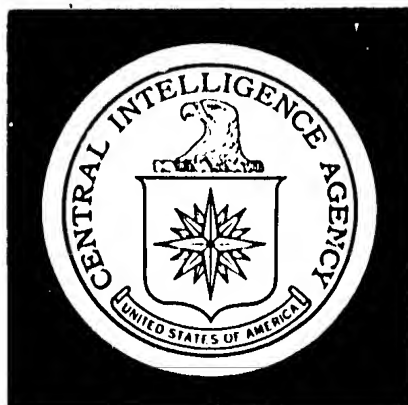


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CIA/OER/IM 71-45 COMM. CHINA AGRICULTURE IN 1970  
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DIRECTORATE OF  
INTELLIGENCE

# Intelligence Memorandum

*Communist China: Agriculture In 1970*

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CENTRAL INTELLIGENCE AGENCY  
Directorate of Intelligence  
March 1971

INTELLIGENCE MEMORANDUM

Communist China: Agriculture In 1970

Introduction

This memorandum surveys agricultural developments in Communist China in 1970. It describes the harvests of grain and industrial crops, appraises the importance of increased supplies of chemical fertilizer and farm equipment, and considers the effects of water conservation programs. It also deals with the issues of agricultural policy and agricultural technology. Finally, the memorandum places the agricultural developments of 1970 in the perspective of the newly announced Fourth Five-Year Plan for 1971-75.

Chinese Claims

1. In general, 1970 was a favorable year for agriculture in Communist China (for areas of agricultural cultivation and for administrative divisions, see the two maps, inside back cover). The regime reported that "total and per hectare grain output exceeded the previous records," that the output of most industrial crops, with the exception of cotton, increased, and that the number of draught animals and pigs "increased considerably." An analysis of these claims -- supplemented by independent information on weather, chemical fertilizer, and foreign trade -- supports their general validity.

*Note: This memorandum was prepared by the Office of Economic Research.*

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2. The output of grain, which is overwhelmingly the most important product of China's agriculture, is estimated at 215 million to 220 million metric tons in 1970. This represents an increase of about 15 million tons over 1969 and perhaps 5 million tons above the previous peak of 210 million to 215 million tons reached in 1967.\* Production of grain in 1964-70 is estimated in the accompanying tabulation.

<u>Year</u>	<u>Million Metric Tons</u>
1964	180-185
1965	190-195
1966	195-200
1967	210-215
1968	195-200
1969	200-205
1970	215-220

3. Both the early (spring) harvest and the late (autumn) harvest of grain were good but not outstanding.\*\* In general the early harvest was mediocre in the northern areas of the country and good to outstanding in the south. Conversely the late harvest was good in the north and only average in the south. As a result the year's harvest of grain was above the 1969 level in all but a few provinces. (For a discussion of provincial claims for grain production in 1970, see the Appendix.)

4. While the overall grain harvest was favorable in 1970, certain crops in various areas of China suffered damage. In the fall of 1969 the sowing of winter wheat was delayed by drought in the northern and by waterlogging in the southern part of the winter wheat belt. As a consequence, the acreage plan for winter wheat was probably not fulfilled.

\* For details on the estimate for 1967, see CIA ER IR 70-19, Problems And Policies In China's Agriculture, July 1970, SECRET/ [REDACTED]

\*\* The early harvest normally provides about one-third and the late harvest about two-thirds of the annual output of grain.

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To help compensate for the shortfall in acreage, an additional one-half million hectares of land was sown to wheat in southern areas where wheat is not normally an important crop.\* An unusually late, cool spring probably caused above-normal winter wheat kill in the north and delayed the sowing of early rice in the south. Despite the delay, the acreage of early rice was enlarged substantially, especially in Central China. In Hunan and Hupeh Provinces, for example, the acreage reportedly increased by 13% and 30%, respectively. The combination of the increased acreage of winter wheat, the late spring, and the enlarged acreage of early rice caused repercussions throughout the remainder of the year. Although the crop of early rice was excellent, the peasants were hard pressed to harvest the early rice and transplant the crop of late rice in the summer and to harvest the late rice and complete autumn sowing in the fall.

5. The only known major calamity occurred over the eastern one-third of Kwangtung Province where typhoons in September caused devastating floods, spoiling an otherwise promising crop of late rice. Reports from the province indicate that large areas of crops were washed out and that only one-third of the normal yield was expected in those fields where harvesting could be completed.

6. Even though weather conditions in 1970 were improved over 1969, they fell short of the excellent conditions that prevailed in 1967. The reason that grain output in 1970 exceeded the bumper 1967 harvest was the greater availability of industrial inputs in 1970 and, possibly, a somewhat larger acreage of grain crops. Chemical fertilizer provided more than 50% (over 1.0 million tons) more crop nutrients in 1970 than in 1967.\*\* The availability of other inputs -- pesticides, tractors, tools, water pumps -- was substantially greater

\* For additional information on crop acreage in China, see CIA ER Agricultural Acreage In Communist China, 1949-68: A Statistical Compilation, August 1969, FOR OFFICIAL USE ONLY.

\*\* For further details on the supply of chemical fertilizer in China, see CIA ER IM 70-169, Communist China: Recent Trends in Fertilizer Supply, November 1970, SECRET, [REDACTED]

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than in 1967. And, for the first time since 1956, there was a concerted effort to reclaim marginal land for cultivation during the winter of 1969-70. At least a part of this land was sown with grain crops. The area of multiple cropping was also increased in 1970, particularly in Central China.

7. There was also some substitution of grain for industrial crops in 1970. Peasants in Fukien Province, for example, were prohibited from sowing industrial crops without special permission. The peasants in Chengte County -- primarily a cotton growing region in Kiangsi Province -- were strongly criticized for thinking that growing cotton was more important than growing rice. After attendance at Mao Tse-tung Thought study classes, all peasant families "learned the importance of farming for the sake of world revolution" and increased the output of early rice. Kwangtung Province reported that more land was sown to dry land grain crops than in previous years. Since most dry fields are normally sown to industrial crops, the increase of dry land grain crops was at least in part at the expense of industrial crops.

Industrial Crops and Soybeans

8. With the exception of cotton, the output of industrial crops improved in 1970. Included among the commodities for which gains were claimed were oilseeds, sugar, tobacco, tea, fruits, and silk cocoons. Although grains were substituted for industrial crops in some areas, the overall acreage of industrial crops could have increased in 1970 because of the sowing of the crops on newly reclaimed land. Reports have indicated that much reclaimed land is not tillable in the conventional sense but rather consists of the sowing of a few plants on sloping land or the planting of crops in remote areas. Sugar crops, fibers, and oilseeds in particular have reportedly benefited from this practice.

Cotton

9. Cotton acreage in 1970 was about the same as in 1969. None of the major cotton growing provinces reported an increase in cotton acreage, and

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only one province -- Kiangsu -- claimed that the state acreage plan had been overfulfilled. On the other hand, more fertilizer was reportedly allocated to cotton than in past years. Output was claimed to have increased by from 10% to 20% in three important producing provinces -- Shantung, Honan, and Hopeh -- but these increases were offset by the effects of a wet spring, unusually heavy infestations of insects and plant disease, and waterlogging that plagued the crop in other major cotton growing areas. On balance, output of cotton seemed little changed from 1969.

Soybeans

10. For a number of years the mass media have said little on the cultivation of soybeans. Historically, soybeans have been a major export crop and also a staple foodstuff in many regions of China. Following the calamity years of 1959-61, soybeans, which have a high value per ton but are a low yielding crop, were replaced by higher yielding grain crops in many areas. The recent references to soybeans in the official press suggest that this crop may be making a comeback. Although the acreage of soybeans declined in Heilungkiang Province in 1970, the yield and output were reportedly up by 40% and 33%, respectively. In neighboring Kirin Province, an enlarged acreage of soybeans was said to be accompanied by a 30% increase in yield and by a 50% increase in output. Claims from these two key soybean provinces, while possibly exaggerated, may attest to a substantial increase in soybean production in 1970.

Sugar Crops

11. Increases in the output of sugar in 1970 apparently were moderate despite a substantial increase in the acreage of the sugar crop. The acreage of cane in Kwangtung Province, which accounts for over 40% of China's acreage of cane, reportedly increased by 17% in 1970 and reached an alltime high. Similarly, the acreage of cane was claimed to have increased by 20% in Fukien Province and was almost doubled in Kwangsi Province. In Heilungkiang Province, China's major grower of sugar beet, the acreage was increased by almost 8%. However, only Fukien, which reported that sugar production increased by 50%, has claimed a large increase in output.



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Current Agricultural Policy

12. The record harvest in 1970 represents a significant payoff from the regime's "agriculture first" policies\* adopted beginning in 1962. Such measures as (a) increased investment in industries producing inputs for agriculture, (b) regular imports of chemical fertilizers, and (c) the concentration of these inputs on the most productive farmland have enabled the Chinese to increase grain production at a rate commensurate with the growth in population. Agricultural productivity has also been enhanced by the avoidance of policies further restricting peasant incentives. In particular the regime abandoned measures adopted during the Leap Forward restricting private enterprise and now permits individual initiative in the cultivation of private plots and actually encourages the private raising of hogs and poultry.

Inputs

13. After 1962 the switch in agricultural policy brought rapid increases in the electric power, conventional and garden-type tractors, agricultural tools and equipment, agricultural chemicals, and chemical fertilizer supplied to agriculture. While the volume of many of these non-farm produced inputs cannot be quantified with precision, the Chinese peasant in 1970 was clearly benefiting from record levels of such inputs, as described in the following paragraphs.

Chemical Fertilizer

14. The use of chemical fertilizer reached an alltime high in 1970 and was the single most important factor in the increase in the output of grain. As shown in Table 1, over 3 million tons of chemical nutrients was available for agriculture

\* The term agriculture first is used in this memorandum to designate those measures which were directed to the rapid restoration of a minimum food supply in the wake of the Leap Forward disaster; concurrently, the regime maintained the priority of a narrow range of industrial activity including the expansion of the petroleum industry and the development of nuclear-armed missiles.

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in 1970, or about 25% more than was available in 1969. Imports contributed somewhat more than domestic production to the increased tonnage of nutrients.

15. Imported fertilizers are generally of higher quality than domestic fertilizers. In recent years the regime has relied almost exclusively on small and medium-sized plants to increase domestic output of chemical fertilizers.

Table 1

Communist China: Estimated Availability  
of Chemical Fertilizer a/

Million Metric Tons			
<u>Year</u>	<u>Supply</u>	<u>Production</u>	<u>Imports</u>
1964	1.04	0.68	0.36
1965	1.52	0.88	0.64
1966	1.80	1.08	0.72
1967	1.94	0.78	1.16
1968	2.18	0.94	1.24
1969	2.45	1.14	1.32
1970	3.03	1.33	1.70
	to	to	
	3.11	1.41	

*a. Nutrient weight. Because of rounding, components may not add to the totals shown.*

As a consequence a large and increasing share of the domestic product has consisted of low-quality, low-nutrient fertilizer such as aqua ammonia and ammonium bicarbonate which is unsuited for most modern agriculture practices. The greatest boost

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to grain production has been achieved by concentrating the limited quantity of high-quality chemical fertilizer and other non-farm produced inputs on stable high-yield fields. The continued expansion of such areas will have to be supported by increased imports of chemical fertilizer unless substantial investment is made to expand the number and capacity of large plants to produce high-quality fertilizers.

Mechanization

16. The rapid growth in the use of electricity and petroleum products to power agricultural implements continued in 1970. For example, the capacity of electric pumps supplied agriculture during 1970 was reportedly one-sixth of the total increase attained during the period 1949-69. While still small in absolute terms, production of tractors has more than doubled since 1962 and new garden-type models have been developed for use in small fields and hilly terrain. Mechanical power has been applied to a variety of functions ranging from the plowing and cultivation of fields to the threshing and winnowing of grain. Many types of farm implements manufactured in China are obsolete by Western standards and only a small number of production teams can be supplied from current production. However, those production teams fortunate enough to be in possession of even simple machines are able to improve the timeliness of many field operations and reduce the amount of loss during the harvesting and processing of grain.

Water Conservation

17. The intensity of the annual water conservation campaign in 1970 was probably exceeded only by that during the Leap Forward in 1958-59. However, in contrast with the Leap Forward when huge masses of peasants were mobilized for overly ambitious projects at the expense of regular farm output, new construction in 1970 was primarily of the small farmstead variety and did not seriously interfere with the care of crops. National data are not available to show the size of the area that may have benefited from such construction. Provincial claims have been quite modest considering the magnitude of the program. For example, Hupeh Province reported:

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The total amount of earth and stone work completed was 78% up on that of the scheduled plan and was over double that of 1969 and 20% over that of 1958, the year of the "Great Leap Forward." The total area of land guaranteeing good harvests irrespective of drought or floods has been expanded by 67,000 hectares.

By contrast, this same province claimed that over 900,000 hectares were brought under irrigation as the result of the water conservancy effort of 1958.

18. Under normal weather conditions most small water conservation projects are probably an asset in areas where traditional agriculture is practiced. However, their effectiveness for modern agriculture or during extremes in the weather is restricted. These latter conditions call for larger projects which can provide a dependable system for storing large quantities of water. The introduction of pumps alone will displace labor and will permit the more timely movement of water in peak seasons; but pumps by themselves will not offset the effects of extended drought or permit the application of high-yield agricultural techniques.

19. The sinking of wells is a major potential source of water in China. The past experience of Honan, Hopeh, and Liaoning Provinces -- which have been among the leaders in the sinking of new wells -- suggests this method has its limitations since an increase in the number of wells often leads to depletion of underground water supplies.

20. No large capital intensive water conservation projects have been initiated by the state since the completion in the early 1960s of the ill-fated Sanmen Gorge Reservoir in Honan Province. Huge amounts of silt have been building up in this reservoir, clogging the generator intakes and dimming the prospects for large-scale production of electric power. Instead of this showpiece type of project, the regime has been sponsoring large drainage projects, usually in response to serious

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flooding or waterlogging. The biggest of these projects requires the mobilization of tens of thousands of workers. Foremost among the projects completed or nearing completion in 1970 were the Hunwei River Project in Shantung Province; the Heilungkang and the Taching Projects in Hopeh Province to improve the drainage of the Hai River Valley in Hopeh Province (in the North China Plain); the To-Hsinpien Project in Honan, Anhwei, and Kiangsu Provinces to provide drainage in the Huai River Valley (in the southern portion of the North China Plain); and the Chiangshan River Project in Hupeh Province (along the middle reaches of the Yangtze River). Much of this construction is in the form of improvements to existing facilities rather than the building of new projects.

21. As early as 1954 the Communists had claimed that flooding had been brought under control in the Hai and Huai River Valleys. However, extensive flooding and waterlogging in 1963 and again in 1964 proved these facilities to be inadequate; many became clogged with silt. A mammoth campaign to correct these deficiencies and to rejuvenate existing facilities in these two basins was begun almost immediately and was only completed in 1969-70. But even now it is uncertain whether the threat of flood has been averted. For example, the official New China News Agency reported on 24 November 1970, "The people of Hopeh Province -- after seven years of hard efforts have *basically* checked flood and waterlogging in *most* of the Hai River Basin" (*italics supplied*). The capacity to resist calamities has been improved, it is claimed, on about 40% of the farmland in the province. This is a region plagued by both flood and drought, and it remains to be seen whether the new drainage projects can cope with extremes in precipitation similar to those that occurred in 1963-64. Certainly they will contribute to agricultural output under reasonably normal conditions.

### Technology

22. The gains in agricultural output since 1962 rest on increases in material inputs and the application of known water conservation methods. The Chinese have not achieved the technological breakthrough necessary to realize the high yields that

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are possible with modern agricultural techniques. In 1956 the Twelve-Year Plan for Agricultural Development established a number of goals that were to be accomplished by 1967. However, only a handful of production teams and hsien had fulfilled these targets in 1970, and according to the current timetable an additional three to five years will be required for most areas to complete the plan. The failure to meet these ambitious, but not totally unrealistic, goals is due primarily to a lag in technology. Rather than seek the large gains that might result from long-term basic research, the regime has chosen to use its small corps of professional agricultural scientists to secure immediate gains in agricultural output. During the Cultural Revolution (1966-69), the agricultural scientists suffered along with the rest of the "scientific establishment." Perhaps the most damaging legacy of the Cultural Revolution will prove to be the termination of long-term genetic research aimed at developing superior seed varieties. While a gradual broadening of agricultural technology has occurred in the countryside, the research base has remained weak and no short-term technological breakthrough is likely.

#### Intensive Use of Labor

23. The regime has supplemented the "agriculture first" policies with campaigns to utilize peasant labor to build up agricultural capital. The mobilization of peasant labor for this purpose regained official favor with the introduction of the "Learn from Tachai" campaign in 1965.\* The movement has subsequently gained momentum, especially in the last two years. During the winter of 1969-70 and again during the slack periods in the summer and fall of 1970, millions of peasants were set to work collecting compost, building simple water conservation projects, reclaiming marginal land for agriculture, and terracing fields. Some areas again

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\* This campaign centers on the emulation of the model Tachai production brigade in Shansi Province which is supposed to have overcome its unfavorable endowment of natural resources by "self reliance," sheer human effort, and the application of the "thoughts of Mao Tse-tung." This spirit is prescribed now for agriculture of the whole country.

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expended too much labor on these pursuits at the expense of more important tasks. It was reported in Hupeh Province, for example, that "too many laborers were allotted to water conservation projects, double task work [autumn harvesting and sowing of winter crops] was adversely affected." While similar reports have been received from other areas, these appear to be the exception rather than the rule. In short, the more intensive use of agricultural labor in 1970 did not approach the Leap Forward madness and seems to have been a rational way to build up the capacity of the agricultural sector through the use of a plentiful factor of production.

24. Rusticated students and redundant workers continued to stream from urban to rural areas in 1970. This labor has been of indirect assistance to agriculture through contributions in the field of medicine, education, and agricultural support industries. Direct benefits have been small. The displaced urbanities -- who number 20 million on one count -- have found the Spartan living standards of the peasant difficult to accept. They have had even greater difficulty accepting the dull, monotonous, and dirty lot of the field hand. Peasants resent their new comrades because they represent more mouths to share in the harvest and because they display an obvious lack of enthusiasm for farm work.

#### Organizational Aspects

25. Although there was talk during the Cultural Revolution of resurrecting the commune as the locus of authority in agricultural matters, no basic organizational change has taken place in the rural areas since the collapse of the Leap Forward. The three-tier structure of commune, production brigade, and production team, with the team as the basic managerial unit, continued unchanged in 1970. The general denigration of authority, particularly party authority, during the Cultural Revolution (1966-69) may have strengthened the ability of the teams to obtain adjustments in the demands of the state favorable to their own interests. The authority and responsibility for making economic decisions concerning purchases of inputs, the application of inputs to specific crops, and the distribution of income after the harvest -- although

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limited by state quotas for production and procurement -- remain with the production team, that is, those most directly affected by success or failure in agricultural work. Taken together with the continued tolerance by the authorities of private plots and small-scale private marketing, this limited area for decision-making appears to be a positive factor in China's recent progress in agricultural production.

#### Food Consumption

26. Consumption of all foods during 1969-70 remained at about 2,000 calories daily per capita, a level that enables the Chinese to eat reasonably well. Complaints of food shortages come from certain areas where crops suffered from insects and/or unfavorable weather.

27. Individual rations of cereal grains in 1970 appear to have increased slightly over the previous year, presumably a reflection of bigger crops. This increase, however, was more than offset by the reported decline in the availability of potatoes. The increased availability of fruits, eggs, meat, and vegetables other than potatoes, produced primarily on the private plots, enabled the populace to continue the gradual improvement in quality of diet.

28. Substantial variations in the level of food consumption continued among different groups and different areas of the country. Some production brigades are known as "rich brigades" with better land, more equipment, and the income to buy chemical fertilizers. Some brigades in any year suffer from bad luck in the weather or misguided instructions from above. The weakening of the Communist Party and governmental control mechanism during the Cultural Revolution might be thought to have accentuated the resultant differences in food consumption. There is, however, no strong evidence that this is the case.

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Wheat Imports

29. Grain ration levels in the northeastern coastal cities continue to be maintained by imports. Grain purchases in 1970 were originally scheduled at 4.2 million tons. However, the carryover of French wheat, originally scheduled for delivery in 1969, brought total 1970 imports of wheat to about 5 million tons.

30. Thus far in 1971 China has signed only one contract calling for the delivery of 2.7 million tons of wheat from Canada. China is likely to purchase additional wheat from Canada and/or Australia for delivery in 1971 to maintain the 1961-70 level of 4 million to 5 million tons per year. Chinese negotiations with Australia for wheat in 1971 may be complicated by Chinese pressures for formal diplomatic recognition by Australia.

Outlook, 1971-75

31. Recent improvements in agricultural output must be a source of satisfaction to the Chinese Communist regime. Yet there should be concern in official circles as to whether these successes can be sustained and whether agriculture's contribution to overall economic progress can be enlarged during the upcoming Fourth Five-Year Plan (1971-75). Since the near starvation years of 1959-61, Chinese Communist agricultural policies have resulted in a restoration and maintenance of the minimum level of food production needed to feed a huge and growing population. Food supplies now appear to be adequate, and apparently some reserve stocks have been accumulated to insulate the economy from the impact of a poor harvest. Thus the food supply problem has been eased but not solved.

32. Increased grain output is the result of the substantial increase in inputs into agriculture and of generally favorable weather conditions. Barring an unlikely breakthrough in technology, there will be a slow but steady increase in investment outlays needed to maintain the growth in grain output. The growth in grain production since 1964 has largely occurred as the result of the phenomenal

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increase in fertilizer supply at an annual rate of almost 20%. Similar rates of increase of fertilizer would seem to be required in the future if food supplies are to keep up with the expanding population and permit some further buildup of stocks. Moreover, the expansion and construction of industrial plants, transportation facilities, military establishments, and water conservation projects have been gradually encroaching upon agricultural land and will continue to do so in the future. In the short run at least, these losses can be only partly offset by extending cultivation to poor-quality land at the margin. Therefore, it will be necessary to increase the average yield per hectare of land under cultivation.

33. As for industrial crops, prospects are bleak for any substantial expansion because of the continued pressure to expand both the acreage and material inputs for food crops. The cotton crop will almost certainly remain well below its 1958 peak level, particularly since the government is pushing the development of chemical fibers.

34. The agricultural sector has benefited from nine straight years (1962-70) of average to excellent weather. Two or three bad crop years in a row might cause a serious food crisis but would not change the basic balance between agricultural resources and the needs of the population as described above. In any event, the potential effects of unfavorable weather on agricultural output are gradually being reduced through improvements in the water control system.

35. A final factor in assessing agricultural prospects for 1971-75 is agricultural policy. For the last several years the regime has successfully steered between the demands for ideological purity and the practical requirements for incentives. The Tachai system, according to the official press, has repeatedly run into peasant resistance because of its de-emphasis of material incentives and rigid subordination of peasant interests to those of the state. If the regime should miscalculate and press the Tachai system too hard, much of the potential grain from China's agriculture must be lost. So far in 1971 there is no indication of a sweeping return to radical policies in agriculture.

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36. Up to now, we have only the bare announcement of a Fourth Five-Year Plan for 1971-75 which is to further advance China's economic development. The assessment of prospects in the agricultural sector presented here suggests that agriculture can continue to feed China's growing population, given

- reasonably favorable weather,
- continued large increases in inputs of chemical fertilizers and farm equipment, and
- a permissive policy toward material incentives.

The resource requirements for food are so great that prospects for a substantial increase in industrial crops are slight. The flow of agricultural raw materials to Chinese industry and the output of agricultural exports -- which help finance Chinese imports of industrial equipment and materials from abroad -- probably will not increase significantly in the near future. Thus the contributions of agriculture to the expansion of industrial production during the new five-year plan are likely to be more limited than was the case in the decade of the 1950s.

#### Conclusions

37. The year 1970 was a favorable one for agriculture in Communist China. The output of grain reached a record 215 million to 220 million tons, an increase of about 15 million tons over 1969 and some 5 million tons above the previous peak reached in 1967. The harvest of industrial crops was not as satisfactory as the grain harvest. Cotton, by far the most important industrial crop, fared no better than in 1969.

38. The record harvest of grain in 1970 represents a significant payoff from the "agriculture first" policies adopted by the government in 1962. In 1970 the flow of inputs from industry to agriculture -- electric power, conventional and garden-type tractors, tools, chemicals, and chemical fertilizers -- reached new heights. In particular, the supply of chemical fertilizer, on a nutrient weight basis, increased from 1.04 million tons in

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1964 to over 3.0 million tons in 1970. Other favorable factors in 1970 were better-than-average weather and a permissive policy toward small-scale private activities.

39. Recent improvements in agriculture must be a source of satisfaction to the Chinese Communist regime. Nevertheless, barring an unlikely breakthrough in technology, the regime will find it necessary to increase agricultural investment to maintain a satisfactory rate of growth in grain output. The expansion and construction of industrial, military, transportation, and water conservation facilities will continue slowly to encroach on agricultural land. Therefore, it will be necessary to intensify past programs to increase the average yield per hectare of land under cultivation. Finally, a return to radical economic policies could quickly undo the output gains of recent years.

40. On balance, the short-term prospects are that China can achieve a satisfactory rate of growth of grain output -- a rate which at least equals and may exceed population growth. On the other hand, the prospects are bleak for any substantial expansion of industrial crops. The flow of agricultural raw materials -- natural fibers, vegetable oils, tobacco, tea, and sugar -- to Chinese industry and the volume of agricultural exports will probably not increase much in the near future. Thus the contributions of agriculture to the expansion of industrial production during the new five-year plan are likely to be more limited than was the case in the decade of the 1950s.

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## APPENDIX

Provincial Claims for Grain Production in 1970

Among the more important grain producing provinces, only Hunan appears to have experienced serious difficulties. Sixteen of the 25 provinces claim a record output of grain (see Table 2). Included in this grouping are six provinces reporting an increase of from 14% to 30% over 1969. These provinces as a group, however, produce only about one-fifth of China's grain and all had poor harvests in 1969. Four provinces, producing about 16.0% of China's grain, claim record harvests of 10% over 1969. Six provinces, accounting for about one-third of China's grain, claim record harvests but have not reported percentage increases. It is not at all certain that all of these claims are valid. Each encountered problems at some time during the year and any increase was probably marginal at best. Nine provinces -- accounting for 31.0% of China's grain -- have not reported or have not claimed a record harvest. Szechwan Province normally produces about 13.0% of China's grain and is by far the most significant of this group. An increase of over 10% above the poor 1969 harvest was reported for Szechwan.

In general, the provincial reports are in harmony with the judgment expressed in the text that Communist China enjoyed a record agricultural year in 1970. The claims are rounded and most are no doubt exaggerated, yet they give rough support to the 7.5% increase in grain output presented in this memorandum.

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Table 2

Communist China: Provincial Reports of 1970 Grain Output and the Approximate Percentage of China's Grain Each Province Normally Produces

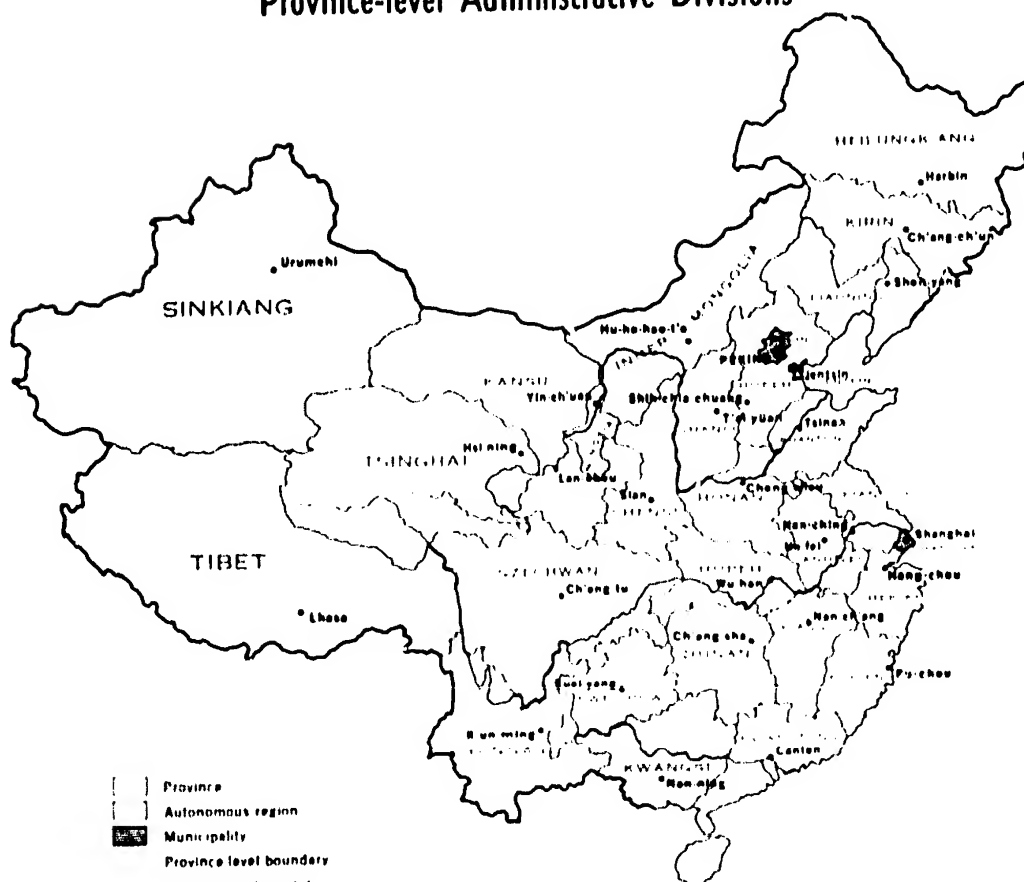
Province	Claim	Percentage of Grain Output
Liaoning	record crop, output 30.0% over 1969	3.3
Kirin	record crop, output 30.0% over 1969	2.4
Fukien	record crop, output 30.0% over 1969	2.3
Hupeh	record crop, output 20.0% over 1969	5.8
Yunnan	record crop, output 20.0% over 1969	3.5
Kwangsi	record crop, output 14.0% over 1969	3.3
<i>Subtotal</i>		<i>20.6</i>
Kiangsu	record crop, output 10.0% over 1969	6.6
Chekian	record crop, output 10.0% over 1969	3.8
Hopeh	record crop, output 10.0% over 1969	3.4
Shansi	record crop, output 10.0% over 1969	2.3
<i>Subtotal</i>		<i>16.1</i>
Shantung	gross output of grain and cotton was a record	6.9
Heilungkiang	record yield and production	3.5
Kwangtung	a record crop	7.0
Anhui	a record crop	6.5
Honan	a record crop	6.1
Kweichow	a record crop	2.2
<i>Subtotal</i>		<i>31.7</i>
Szechwan	output over 10.0% greater than 1969	12.9
Tsinghai	output 20.0% greater than 1969	0.3
<i>Subtotal</i>		<i>13.2</i>
Inner Mongolian Autonomous Region	all around rich harvest	1.6
Kiangsi	33 (of 85) hsien fulfilled target	3.9
<i>Subtotal</i>		<i>5.5</i>
Hunan	no report	6.3
Kansu	no report	2.5
Shensi	no report	2.4
Sinkiang	no report	0.9
Ningsia	no report	0.3
<i>Subtotal</i>		<i>12.4</i>

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# COMMUNIST CHINA

## Province-level Administrative Divisions



# COMMUNIST CHINA

2

## Divisions

## Agriculture

